

OPERATIONAL RISK MANAGEMENT



Division Officer

Brief

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SIGNIFICANT LOSSES OVER THE PAST 5 YEARS



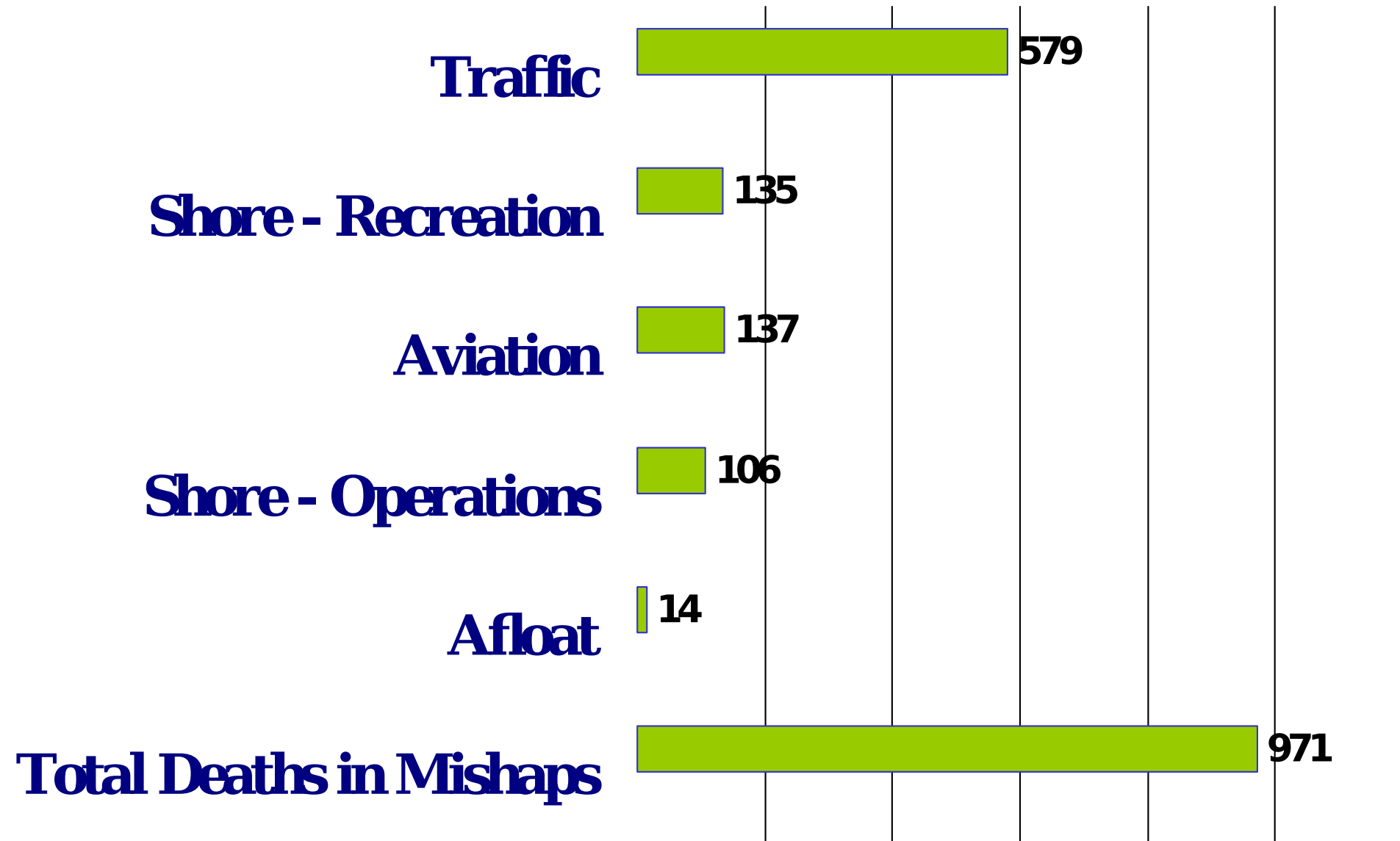
↘ 3.6 billion dollars spent for mishaps on average. With the money we could build 4 DDGs or 3 LHDs.



↘ 971 deaths due to mishaps. Enough people for the crews of the ships built with the 3.6 billion dollars.

More than 90% of all

How Sailors and Marines Died (FY 97 - FY 01)





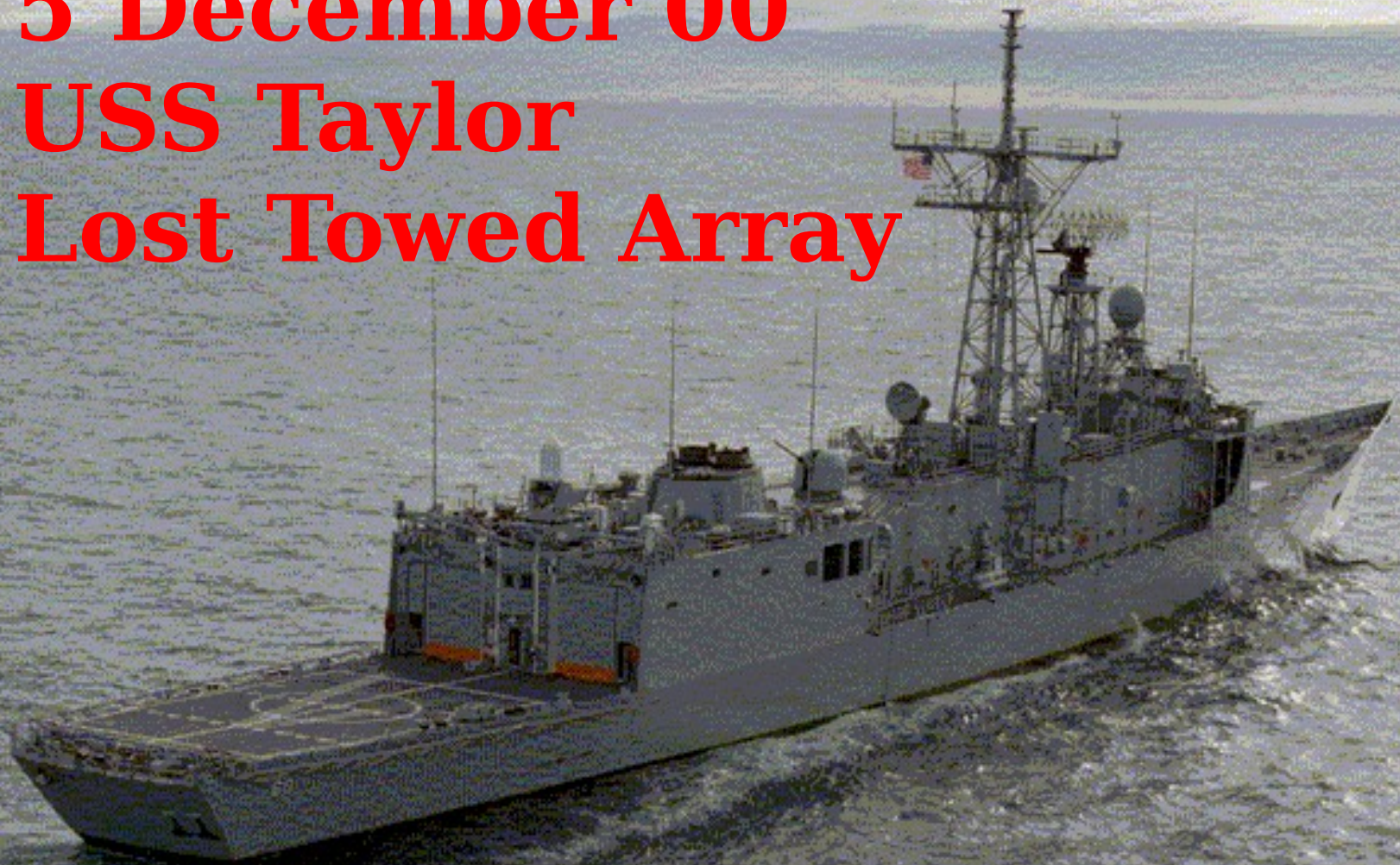




FY 01 Class A Mishaps

- | | |
|-----------------|------------------------------------|
| • TAYLOR | 05 Dec - Loss of SQR-19 |
| • VELLA GULF | 26 Jan - Strut/Shaft Damage |
| • GREENEVILLE | 09 Feb - Collision |
| • PORTLAND | 28 Mar - Death |
| • SAFEGUARD | 05 May - Death |
| • BRISCOE | 07 May - Fire |
| • CONSTELLATION | 04 July - MRG/Shaft Damage |
| • CARTER HALL | 06 July - Death |

5 December 00
USS Taylor
Lost Towed Array



25 January 01 USS Vella Gulf Strut Bearing Damage

STORM DAMAGE



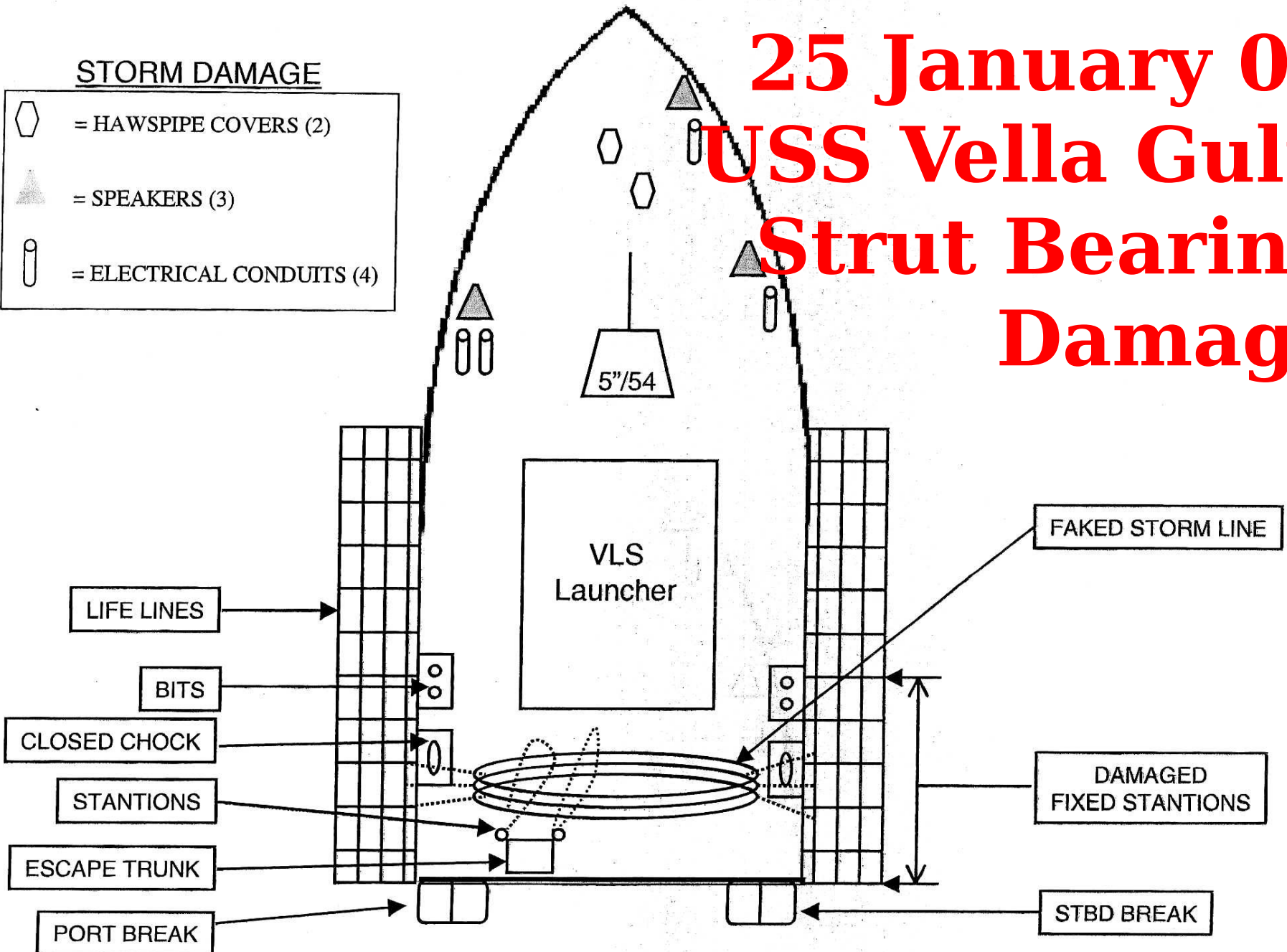
= HAWSPIPE COVERS (2)



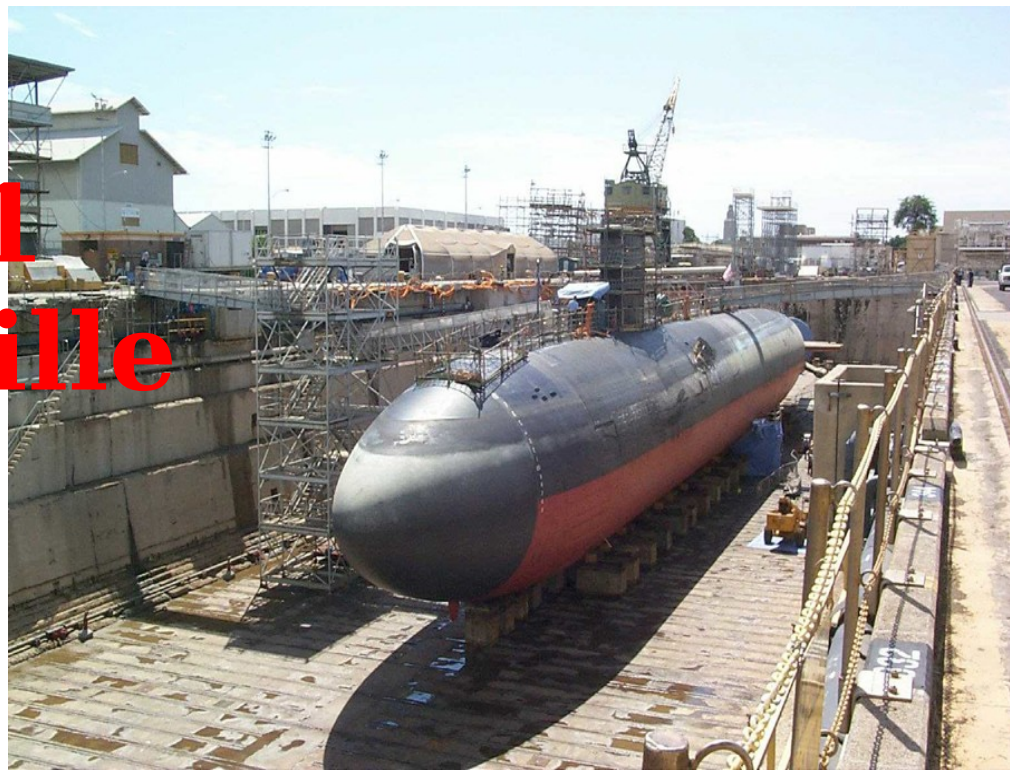
= SPEAKERS (3)



= ELECTRICAL CONDUITS (4)



9 February 01 USS Greenville Collision





**5 May 01
USS Safeguard
Death**

5 5 '01

USS PORTLAND LSD37

28 MARCH 2001



GSK

2 AMR

2 MER

7 May 01
USS Briscoe
Fire



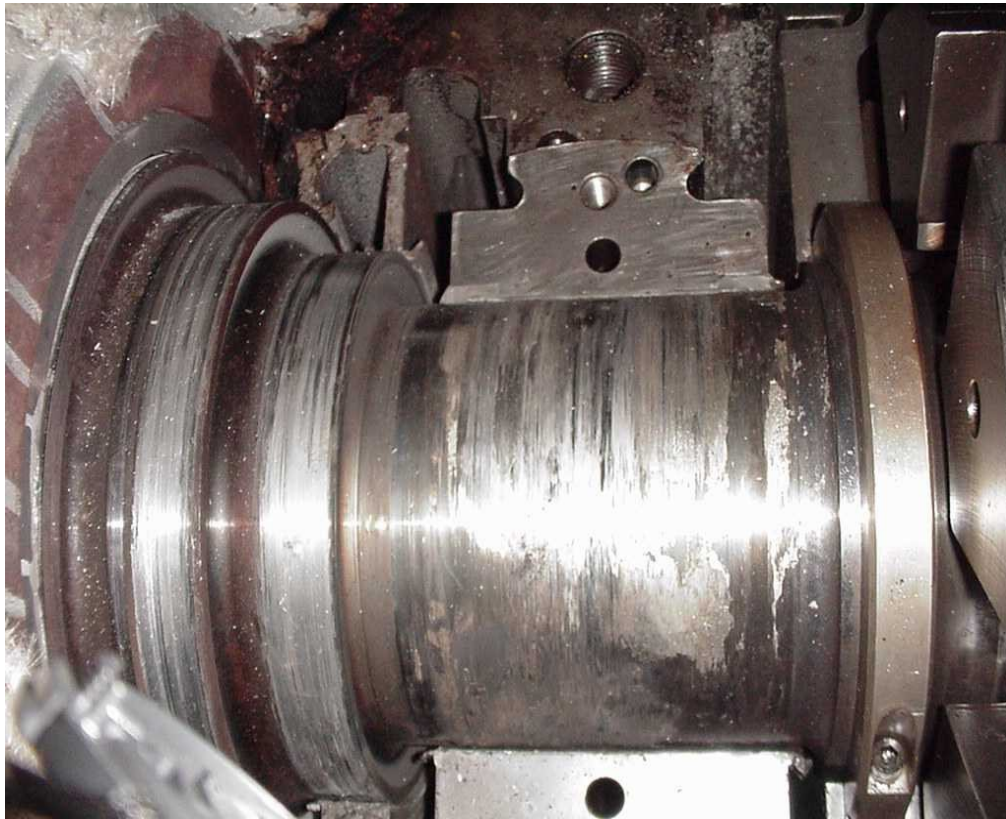


6 July 01
USS Carter Hall
Death

4 July 2001

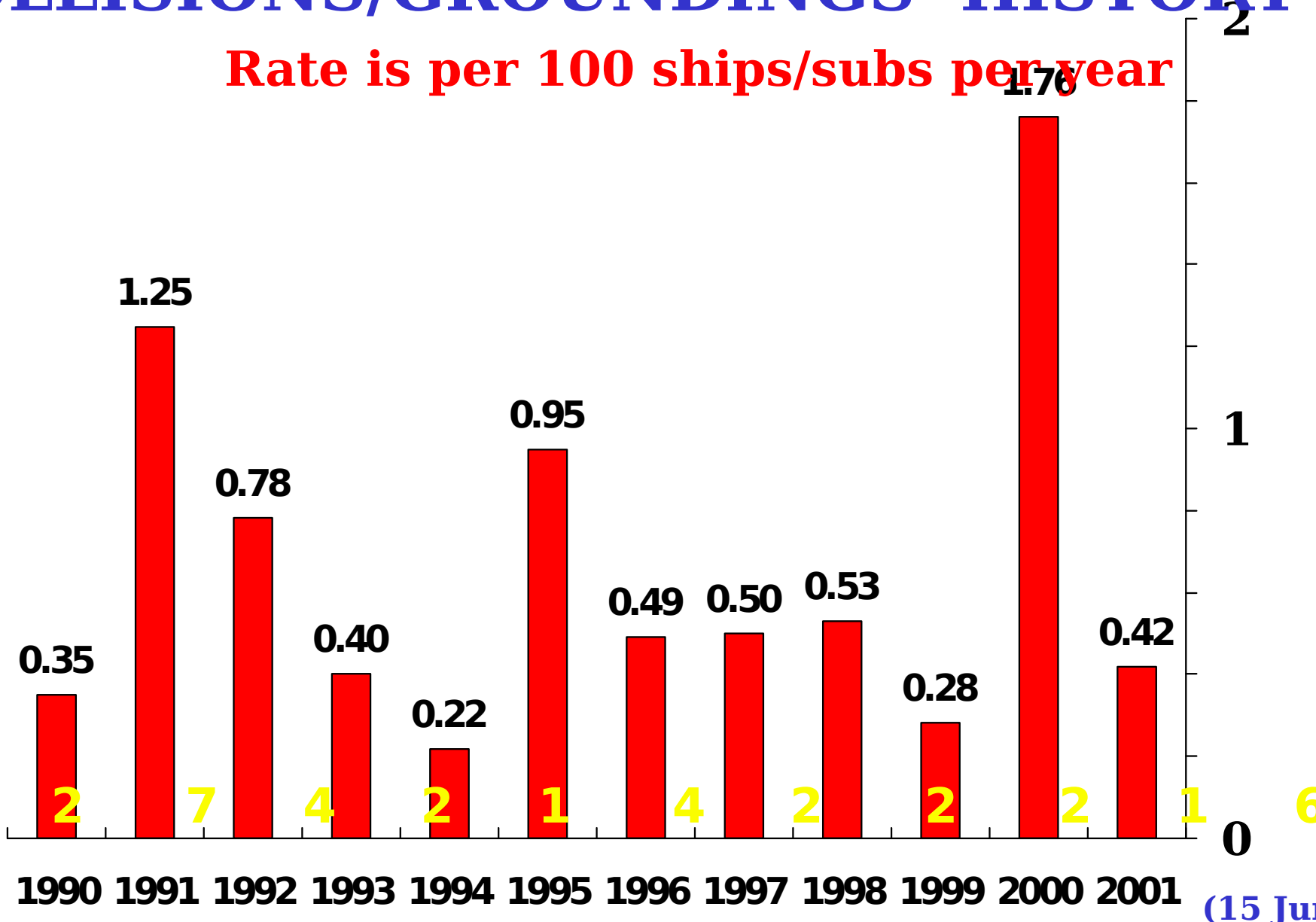
USS Constellation

MRG/Shaft Damage



CLASS A AFLOAT COLLISIONS/GROUNDINGS HISTORY

Rate is per 100 ships/subs per year



19 October 01

USS Inchon
LPH12

Death/"B" Fire



FY 02 to date (Class A Mishaps)

- **NIMITZ**
Loss 14 Oct - **Equipment**
- **INCHON**
Fire 19 Oct - **Death/Class B**
- **PETERSON**
Team/Two
Deaths 18 Nov - **Security**
- **RUSSELL**
MOB/Death 27 Nov -
- **KITTY HAWK** 29 Nov - **Death**
- **BUFFALO**
Equipment Damage 5 Jan -
- **OAK HILL**
damage to LCAC 16 Jan - **FOD**

Risk:



**An expression of possible loss
in
terms of probability and**

IS RISK NECESSARY

... conduct prompt, sustained combat operations at sea to ensure victory.



RISK

“It is true I run great risk;
no gallant action was ever
accomplished without danger.”

*(John Paul
Jones)*

Operational Risk Management

**Provided:
Electronic version of
all briefs**

Training

- **Causes of Risk**
- **Benefits of ORM**
- **3-Levels of ORM**
- **4-Principles of ORM**
- **5-Step ORM Process**

Causes of Risk

- **Resource**
- **constraints**
- **New technology**
- **Complex evolutions**
- **Feeling of “Invincibility”**

Causes of Risk

- **Resource**
- **new technology**
- **Complex evolutions**
- **Feeling of “Invincibility”**
- **Environmental influences**
- **Human nature**
- **Speed, tempo of operatio**

Operationa Risk Manageme:

V

Non- Standard Approach

**Definite approach
or miss**

Random, hit

Proactive

Reactive

**Integrates all types
after-thought
of risk into plan; “What if?”
plan is done**

**Safety as
once**

**Common
process/terms**

Changing Method

Conscious decision

“Can do”

The Benefits of Risk Management

✚ ***Reduction in Injuries and Fatalities***

✚ ***Reduction in Material and Property Damage***

✚ ***Effective Mission Accomplishment***

Operational Risk Management

ORM Process

Has 3 levels of application

Based on 4 principles

Accomplished in 5 steps

3 LEVELS OF APPLICATION

- **1= TIME CRITICAL**

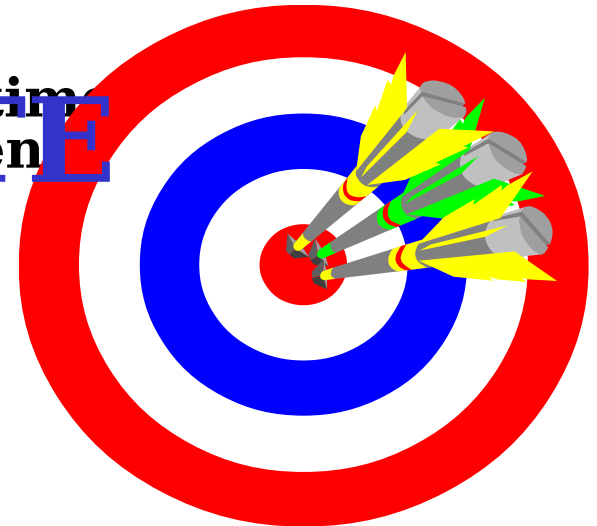
(90% of the ORM processes, are time critical at the individual or work center level)

- **2= DELIBERATE**

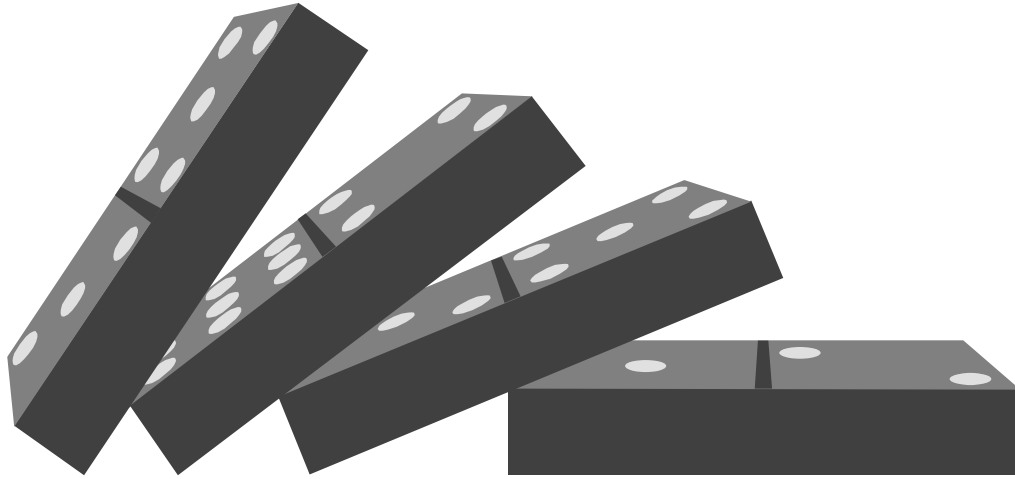
(Underway replenishment)

- **3= IN DEPTH**

(Fleet exercise by battle group)



BASED ON 4 PRINCIPLES



① Accept risk when the benefits outweigh the costs.

② Accept no unnecessary risk.

③ Anticipate and manage risk by planning.

④ Make risk decisions at the right level.

ACCOMPLISHED IN 5 STEPS

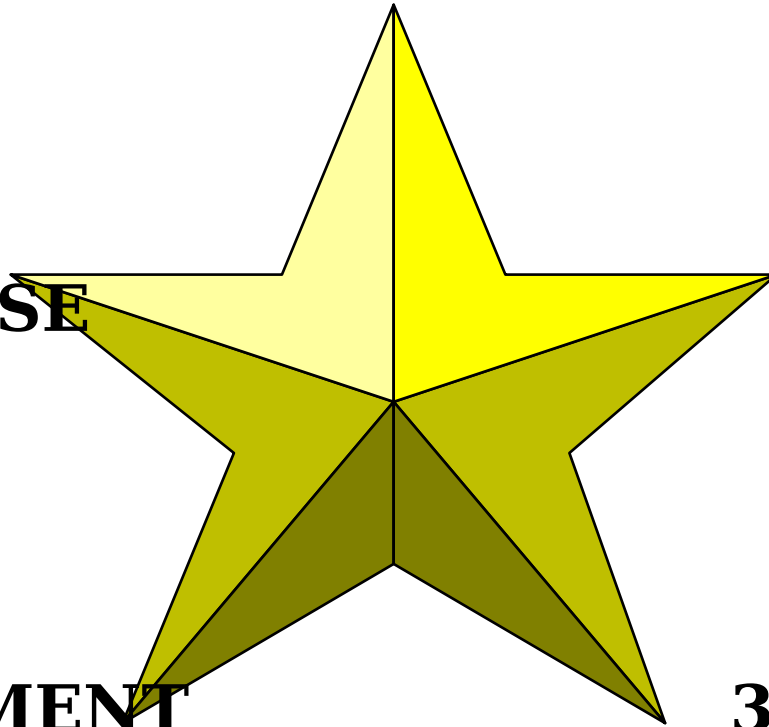
1. **I**DNENTIFY **H**AZARDS

2. **A**SSESS
HAZARDS

3. **M**AKE **R**ISK
DECISIONS

4. **I**MPLEMENT
CONTROLS

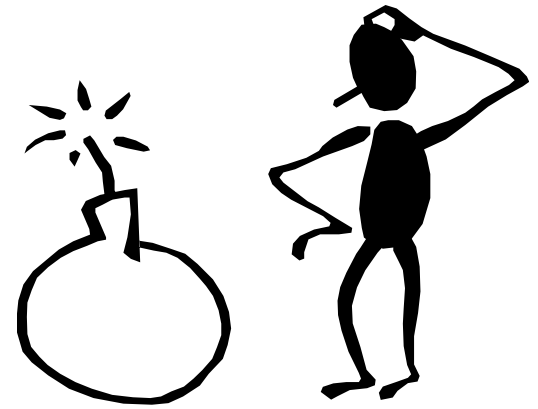
5. **S**UPERVISE



SCENARIO

The ship is in home port. Liberty has been put down at 1200 due to upcoming underway. At 1400 5 pallets of fresh fruits and vegetables (FF&V) and 10 pallets of stores (repair parts) are delivered to the ship and must be struck below. The supply department coordinates with the CDO and a 30 hand working party is called away. The FF&V will be struck below using the Vertical Package Conveyor and the repair parts will be moved to GSK using the cargo weapons elevator. The CDO and duty Supply want all supplies struck below prior to evening chow.

Operational Risk Management



1 Identify Hazards

A hazard is a condition with the potential to cause personal injury, death, property damage, or degradation.

1. HAZARD IDENTIFICATION

HAZARDS

Package Conveyor/Elevator Ops

Lack of Man Power

Lack of Qualified Personnel

Time Constraints

Equipment Status

Fatigue

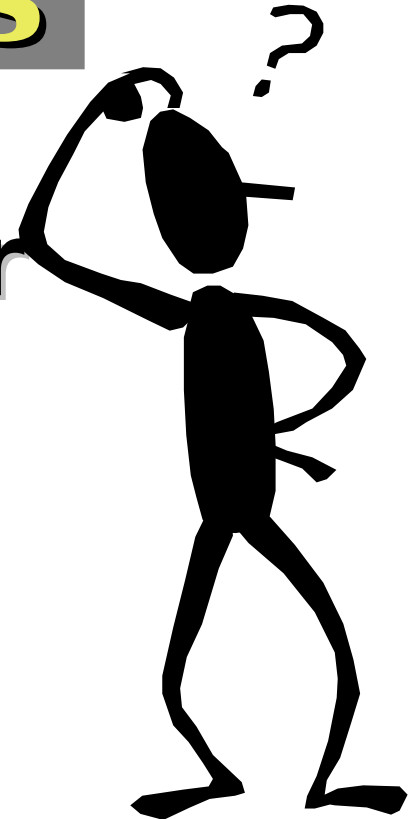
No Plan

Operational Risk Management

Assess Hazards

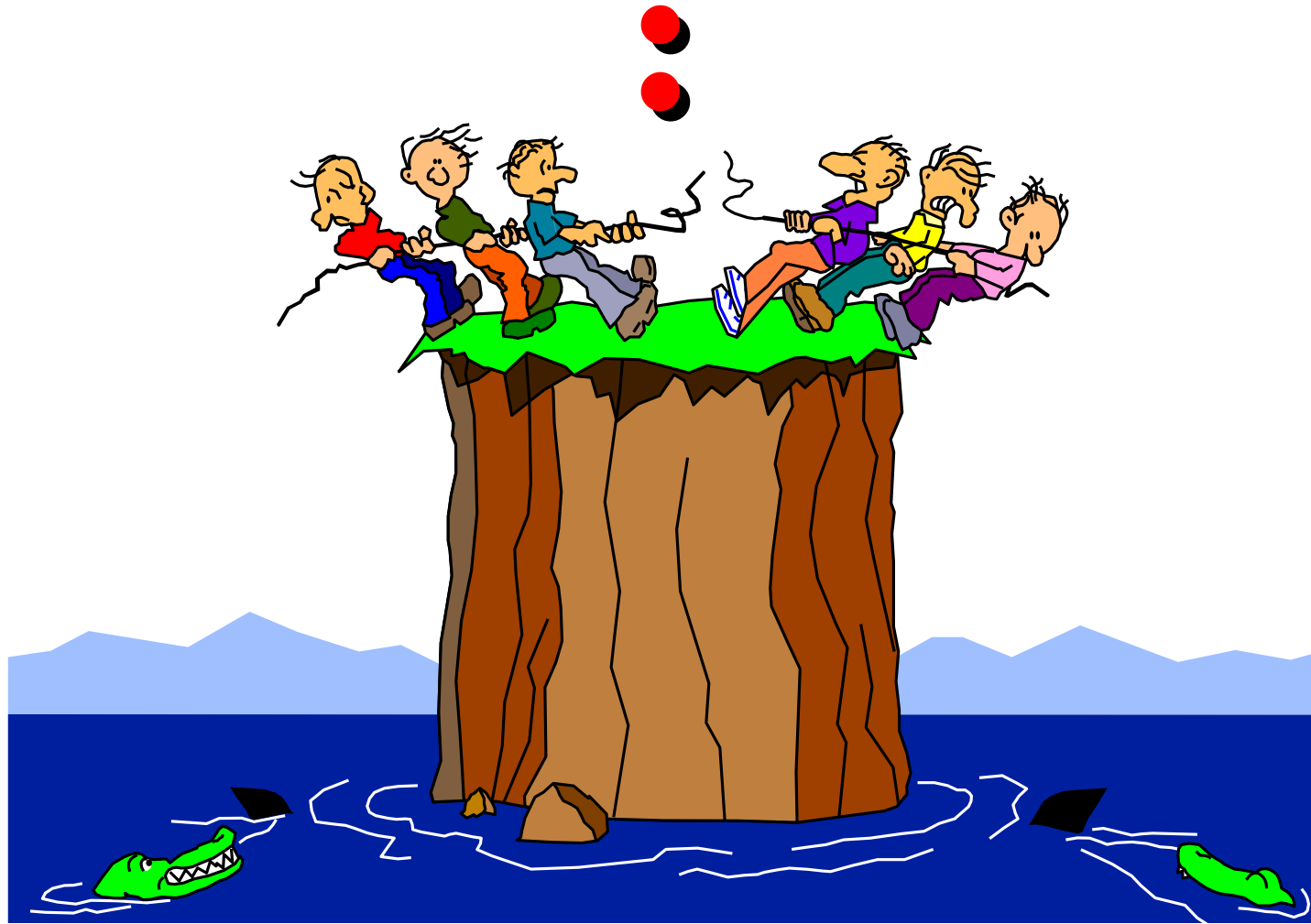
2

Make a Risk Assessment in order to quantify the risk of each hazard.





**The likelihood that a hazard
will result in a mishap.**



**The worst consequence
which can occur as a result of a
hazard**

**Risk Assessment
Code - (RAC)**

- 1 = Critical**
- 2 = Serious**
- 3 = Moderate**
- 4 = Minor**
- 5 = Negligible**

- CAT I = Death, Loss of asset.**
- CAT II = Severe, injury / degradation of asset.**
- CAT III= Minor, injury degradation of asset.**
- CAT IV= Minimal, injury degradation of asset.**

		Probability of Occurrence			
		Likely - Immediate	Probably will occur in time	May occur	Unlikely to occur
		A	B	C	D
Severity of Risk Category	Cat I	1	1	2	3
	Cat II	1	2	3	4
	Cat III	2	3	4	5
	Cat IV	3	4	5	5
Risk Levels Risk Assessment Code					

2. ASSESS HAZARDS

<u>HAZARDS</u>	<u>RISK ASSESSMENT CODE</u> <u>(RAC)</u>	
Package Conveyor/Elevator Ops	B/2	2
Lack of Man Power	C/2	3
Lack of Qualified Personnel	C/2	3
Time Constraints	C/3	4
Equipment Status	C/3	4
Fatigue	D/3	5
No Plan	D/2	4

Operational Risk Management

3

Make Risk Decisions

Prioritize risks... Which hazard should we be concerned with most.

B. Brainstorm... List all items that will help reduce risk.

C. Decide... Proceed with evolution?



Operational Risk Management

3

Make Risk

Decisions

Prioritize risks... Which hazard should we be concerned with most.



3. MAKE RISK DECISIONS

HAZARDS

2-Package Conveyor/Elevator Ops

3-Lack of Man Power

3-Lack of Qualified Personnel

4-Time Constraints

4-Equipment Status

4-No Plan

5-Fatigue

Operational Risk Management

3

Make Risk Decisions

Prioritize risks... Which hazard should we be concerned with most?
B. Brainstorm... List all items that will help reduce risk.



3. MAKE RISK DECISIONS

HAZARDS

**2-Package Conveyor/Elevator
Ops**

3-Lack of Man Power

3-Lack of Qualified Personnel

4-Time Constraints

OPTIONS

- Brief**
- Supervision**
- Follow SOP**
- Qualified Operator**

- Secure Liberty**
- Supervision**
- Use only one Elevator**
- Move only FFV**

- Recall Personnel**
- Don't use Elevator/Convey**
- Supervision**

- Brief**
- Move only FFV**
- Extend Meal Hours**
- Box Lunches**
- Battle Mess**

3. MAKE RISK DECISIONS (CONT)

HAZARDS

4-Equipment Status

4-No Plan

5-Fatigue

OPTIONS

-PMS

-OP Checks

-Eight O'clock Reports

-Supervision

-Make a Plan

-Proper lifting techniques

-Rotate workers

Operational Risk Management

3

Make Risk Decisions

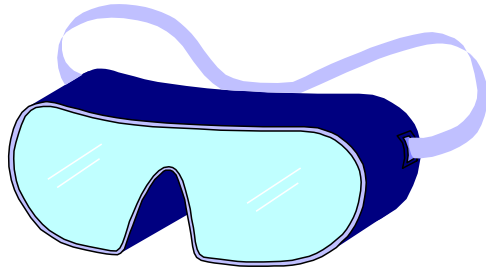
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C. Decide



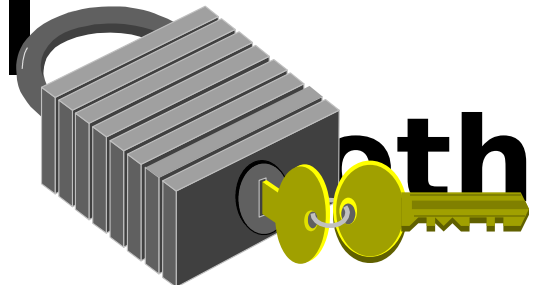
CONTROL



A
method for
reducing risk by
lowering the
probability of
occurrence,
decreasing
potential
severity, both.

DANGER

CAUTION : DO NOT CROSS



Operational Risk Management

4

Implement

• **Controls**

controls

• **Engineering**

• **Personal protective equipment**

4. IMPLEMENT CONTROLS

HAZARDS

**2-Package Conveyor/Elevator
Ops**

3-Lack of Man Power

3-Lack of Qualified Personnel

4-Time Constraints

OPTIONS

- Brief
- Supervision
- Follow SOP
- Qualified Operator

- Secure Liberty
- Supervision
- Use only one Elevator
- Move only FFV

- Recall Personnel
- Don't use
Elevator/Conveyor
- Supervision

- Brief
- Move only FFV
- Extend Meal Hours
- Box Lunches

4. IMPLEMENT CONTROLS (CONT)

HAZARDS

4-Equipment Status

4-No Plan

5-Fatigue

OPTIONS

-PMS

-OP Checks

-Eight O'clock Reports

-Supervision

-Make a Plan

-Proper lifting techniques

-Rotate workers

Operational Risk Management

5

Supervise

- Monitor for effectiveness of controls
- Watch for change. Changes will present new hazards!

Operational Risk Management

A Decision Making Tool to:

- ✓ **Increase our ability to make informed choices**
- ✓ **Reduce our risks to an acceptable level**

ORM is a process...
not a program!

It must become an inherent
way of doing business



Three Crucial Question

- ★ **What can go wrong?**
- ★ **What can I do about it?**
- ★ **If I can't do anything, who do I tell?**

“Risk Management is no accident”